

ORBITER

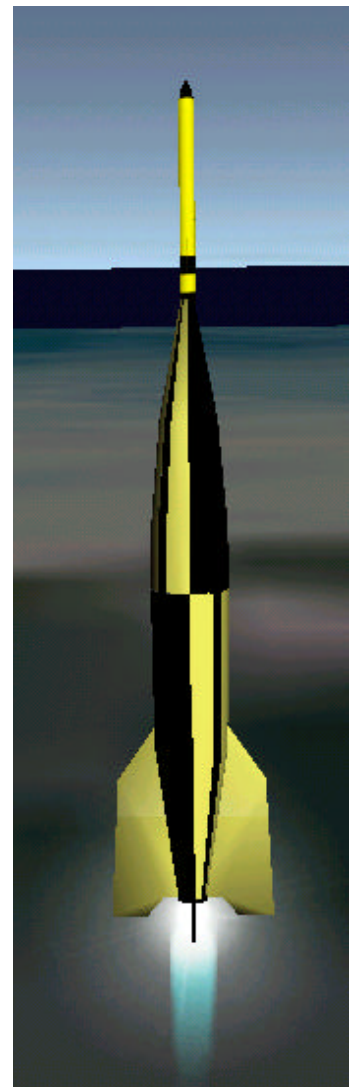
V2, Bumper Version 2.0

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<http://www.orbitersim.com>

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ORBITER	1
V2, Bumper Version 2.0	1
1. INTRODUCTION	2
2. SPECIFICATIONS	2
3. VERSION HISTORY	2
Version 1.0	2
Version 2.0	2
4. LAUNCH.....	3
FLIGHT PLAN	3
KEYBOARD	3
5. CONFIGURATION.....	3
V2.....	3
Bumper	3
6. SCENARIOS.....	4
V2 at White Sands	4
V2 at Peenemunde	4
Bumper at Canaveral	4
Bumper at White Sands.....	4
7. CREDITS	4



1. INTRODUCTION

This document explains how to use and operate the V2 and Bumper (V2 and WAC Corporal) for Orbiter. The V2 and Bumper were both used by the United States for upper atmospheric studies. The Bumper was an early two stage rocket.

2. SPECIFICATIONS

V2		
Length:	14.0 m	
Cross-sections:	24.17 m ²	(projection on yz-plane: side-on)
	24.17 m ²	(projection on xz-plane: top-down)
	2.54 m ²	(projection on xy-plane: head-on)
PMI:	9.71/9.71/.38 m ²	
Mass:	12805 kg	
Empty Mass:	4008 kg	
ISP (sea level)	203 sec	
ISP (vacuum)	239 sec	
Thrust (vac)	27010 kgf	
WAC CORPORAL - poor data ISP extrapolated from thrust, fuel, & 50 sec burn time		
Length:	5.0 m	
Cross-sections:	4.8 m ²	(projection on yz-plane: side-on)
	4.8 m ²	(projection on xz-plane: top-down)
	.09 m ²	(projection on xy-plane: head-on)
PMI:	2.1/2.1/.02 m ²	
Mass:	300 kg	
Empty Mass:	90 kg	
ISP (sea level)	163 sec	
ISP (vacuum)	163 sec	
Thrust (vac)	27010 kgf	

3. VERSION HISTORY

Version 1.0

*Initial Release

Version 2.0

* Updated for the April Orbiter Snapshot

* Updated Sources Files to use the multi-stage SDK.

* Added White Sands, Peenemunde Scenarios

4. LAUNCH

The V2 and Bumper were both used for upper atmospheric studies by the United States. The V2 can get as high as 175 km and down range as far as 213 km. The WAC Corporal on the Bumper can boost the height as far as 600 km.

Both Scenarios are configured to use the LC 1-4 complex of Cape Canaveral for the Earth 1962 base add-on. If you don't have this then the rockets will appear on Pad 1 of the basic Cap Canaveral.

FLIGHT PLAN

MET+0	Launch
MET+78	V2 Cut-off
MET+79	Staging and WAC Corporal Ignition
MET+128	WAC Corporal Cut-off

KEYBOARD

J	Jettison Stage	V2->WAC Corporal *Does nothing for the V2
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5. CONFIGURATION

V2

V2-A:V2

STATUS Landed Earth	<= Standard
BASE Cape Canaveral:15	<= Standard
HEADING 90.00	<= Standard
FUEL 1.000	<= Standard

END

Bumper

Bumper-A:Bumper

STATUS Landed Earth	<= Standard
BASE Cape Canaveral:15	<= Standard
HEADING 90.00	<= Standard
FUEL 1.000	<= Standard
CONFIGURATION 0	<= 0 for V2 1 for WAC Corporal Only

END

6. SCENARIOS

V2 at White Sands

Launch the V2 from White Sands

V2 at Peenemunde

Launch the V2 from Peenemunde

Bumper at Canaveral

Launch the Bumper from LC 3 at Cape Canaveral

Bumper at White Sands

Launch the Bumper from White Sands

NOTE: Some of these Scenarios require the Earth 1962 Base add-on

7. CREDITS

Rob Conley - Module
Dealer McDope - Mesh

Thanks for your support and help